

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015072**Date Inspected:** 18-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****CWI Present:****Yes No****Inspected CWI report:** **Yes No N/A****Rod Oven in Use:** **Yes No N/A****Electrode to specification:** **Yes No N/A****Weld Procedures Followed:** **Yes No N/A****Qualified Welders:** **Yes No N/A****Verified Joint Fit-up:** **Yes No N/A****Approved Drawings:** **Yes No N/A****Approved WPS:** **Yes No N/A****Delayed / Cancelled:** **Yes No N/A****Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

South Tower Lift 1 (At Ship Zhenhua # 18)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts at South Tower Lift 1 at 9 meter and 13meter Diaphragm. Inspected on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00395 Dated June 18, 2010.

Bolt sizes used were M20 x 55 RC Set# DHGM200008 and final torque required was 367 N-m

Manual Torque wrench was been used with Sr. No. XQ2-675.

East Tower Lift 1 (At Ship Zhenhua # 18)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts at East Tower Lift 1 at 38 meter and 43 meter Diaphragm. Inspected on a random basis and found the tension to be in general compliance.

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

Inspection was performed against the Notification No. 00395 Dated June 18, 2010.

Bolt sizes used were M22 x 55 RC Set# DHGM220011 and final torque required was 457 N-m

Bolt sizes used were M22 x 55 RC Set# DHGM220011 and final torque required was 457 N-m

Manual Torque wrench was been used with Sr. No. XQ2-675.

North Tower Lift 1 (At Ship Zhenhua # 18)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts at North Tower Lift 1 at 18 meter Diaphragm. Inspected on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00395 Dated June 18, 2010.

Bolt sizes used were M22 x 55 RC Set# DHGM220011 and final torque required was 457 N-m

Bolt sizes used were M22 x 55 RC Set# DHGM220011 and final torque required was 457 N-m

Manual Torque wrench was been used with Sr. No. XQ2-675.

Segment 8AW to 8BW (Longitudinal Diaphragm) Joint Survey

This QA Inspector performed Joint Inspection with ZPMC Survey Team and ABF Survey Team for the Longitudinal Diaphragm between Segment 8AW to 8BW (Shop Segment Splice) between Panel Point (PP) 64 and PP 65 North(Counter Weight Side) and South (Cross Beam side) side for Offset and Sweep. The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area and Sweep was measured at 100 mm from both side from the Floor Beam and 800mm from both side of floor Beam and at Centre (Total 5 Locations). The measured readings were recorded on Dimension Control Form and was submitted to the Lead and Engineer for review.

Segment 7BW to 7CW (Longitudinal Diaphragm) Joint Survey

This QA Inspector performed Joint Inspection with ZPMC Survey Team and ABF Survey Team for the Longitudinal Diaphragm between Segment 8AW to 8BW (Shop Segment Splice) between Panel Point (PP) 55 and PP 56 North(Counter Weight Side) and South (Cross Beam side) side for Offset and Sweep. The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area and Sweep was measured at 100 mm from both side from the Floor Beam and 800mm from both side of floor Beam and at Centre (Total 5 Locations). The measured readings were recorded on Dimension Control Form and was submitted to the Lead and Engineer for review.

Segment 7DE

This QA Inspector performed Dimension Inspection for the FL3 extension at Cross Beam side for the distortion occurred due to handling reasons the Inspection was performed against Incident Report # 1397 Dated June 16,

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

2010. Observed that dimension is not meeting the requirement.

The measured reading observed as 6mm when measured with 1000mm Straight Edge, conveyed to the lead for further action.

### Segment 8AE

This QA Inspector observed during random visual Inspection at Segment 8AE at PP 65 at Work Point E3, East side of the Floor Beam that Bottom Panel T-Rib Clip is been welded to Floor Beam as gap between the faying surface was observed as 5mm. The work is been performed against the ABF RFI # ABF-RFI-001758R00 Dated May 19, 2009.

Please refer the attached pictures for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

---

**Inspected By:** Math,Manjunath

Quality Assurance Inspector

---

**Reviewed By:** Carreon,Albert

QA Reviewer

---